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THE CHICAGO PLAN, WITH PARTICULAR REFERENCE TO THE RAILWAY TERMINAL PROBLEM

About seven years ago a group of citizens induced the late Mr. Daniel H. Burnham to take up seriously the question of a plan for Chicago. For two years Mr. Burnham, his assistant Mr. Edward H. Bennett, and a group of some twenty members of the Commercial Club gave the question active study. The results have been given to the public in what is known as "The Plan of Chicago."

The science of city-planning is really old, though in practice (at least in this country) it is somewhat new. Hence, while general principles have been evolved, final details are by no means settled. City-planning is, and of necessity always will be, very largely a local question, topography, existing or unalterable conditions having an important bearing on every case. Recent years have brought problems unknown a generation ago. High buildings have added greatly to the possibilities of congestion, and rapid transit has created new problems and conditions. That city-planning is very largely an economic question and that it has an important influence on the housing problem, on the exaggeration of values on the one hand, and the equalization of land values on the other, is becoming more and more generally recognized.

To some extent there is a lack of appreciation of the importance of the Plan. A somewhat superficial view has frequently been taken of the whole matter as indicated by the popular designation of the Plan as "Chicago Beautiful." Any such term, of course, belittles the aims of the founders and the work accomplished. Fundamentally, what these men had in mind was highly and essentially practical—that a great city, like any other corporate undertaking, must plan ahead for its own future. An approximate computation showed that in the twenty-five years immediately preceding this work, even with the debt restrictions of the Chicago city charter, about two hundred and fifty millions had been spent in so-called betterments and improvements. Some of these

expenditures represented money thrown away, because the work of one administration would, to a greater or less extent, be discarded or altered by the next. Furthermore, Chicago—like many other big cities—had practically never considered the problem of a city plan, but, like Topsy, “jes’ growed”! There is plenty of evidence here, as there doubtless is elsewhere, that the platting of streets was left largely to the owners of new subdivisions and that these individuals considered more their own interests in laying out the ground they had to sell, than any permanent scheme of development; and Chicago, being almost flat, it naturally resulted in the time-worn “checker-board” plan of street development, laid out with the points of the compass, instead of, as would have been better, parallel and at right angles to our eastern shore line. The only exceptions to this rule were the roads created by the early settlers, which usually followed some well-defined ridge, or else were straight or diagonal lines from some far-away point to the original trading-post. Examples of these are Clark St., Milwaukee, Archer, Blue Island, Cottage Grove, Ogden, and Grand avenues.

While the study of the city-planning problem has by no means advanced far enough to lay down very definite conclusions, we have at least gone far enough to see mistakes in past methods and to avoid these in the future. Some suggestive points may be given:

1. The laying-out of streets practically all of a uniform width is neither wise nor desirable, and, while the distance between lot lines may properly be uniform, or nearly so, the space between curb lines should, very evidently, be adjusted to meet necessary conditions. There are at least three different types of streets: (a) the main thoroughfare, which carries or is destined to carry a very heavy traffic and is largely fed by traffic from intersecting streets; (b) the less important, or secondary, thoroughfare; (c) the lateral or connecting street, whether intended for business or residence purposes.

2. The idea of the diagonal artery, which has been highly developed by French engineers, as, for example, in the city of Paris and in our own city of Washington (laid out by Washington’s

friend, Major L'Enfant, of the French Army), has the obvious merit of shortening distance. Mr. Burnham and his staff, while realizing this advantage, confined themselves almost wholly to projecting or continuing existing diagonals and the creation of new ones only where it was very necessary to reduce congestion or to create new routes around congested areas.

The importance of an intelligent arterial system is apparent when we study the subject. Thus, the city of New York affords a notable example of a faulty street plan. The north-and-south avenues, which of necessity must carry a very large volume of business (the city being very long and narrow), are spaced far apart and are, therefore, infrequent; whereas the east-and-west streets, all of which are short and simply feeders to the main arteries, are, on the other hand, spaced close to each other and hence are unnecessarily frequent. If this condition had just been reversed, it is probable that New York could have avoided, for a number of years at least, the necessity of elevated roads and subways. In other words, New York has had to supplement the surface of its few north-and-south arteries with overhead and underground tracks, which, being free from the interruption of frequent crossings of traffic, are able to relieve the streets greatly.

Paris has been very largely remodeled, and in respect to its street plans there has been a complete readjustment in the last fifty years. The initial steps in this great undertaking were, of course, taken during the Second Empire and it may be doubted if it could have been accomplished under a pure democracy; but, however that may be, that work, once inaugurated under Louis Napoleon, has been carried forward and extended by the republic. By comparison, the difficulties in the way of carrying out a reform of existing conditions in our country seem very great, and the legal obstacles many. Anyone who has studied the question in this country feels the lack of power and control which the more highly centralized governments of Europe have developed. But the difficulties are surely no argument against the preparation of a plan by an American city. Indeed, they emphasize the need of one. The fact that our charter greatly restricts our debt limit, making it necessary to pay our way as we go, and the lack of con-

tinuity in our city government are both arguments for having a plan toward which every effort and expenditure shall be directed.

Among the fundamental decisions arrived at in the study of the question of a city plan, it was soon discovered that there were none more important than those dealing with transportation, divided broadly as between: (a) extra-urban transportation; i.e., steam railroads connecting us with other cities; (b) suburban transportation; i.e., steam and electric roads connecting us with suburbs; (c) urban transportation lines; i.e., elevated and street trolley lines (to be supplemented in the near future by a system of subways); (d) the vehicular traffic; i.e., fast- and slow-moving motor and wagon traffic on streets; (e) lake and river transportation.

It is apparent that the whole street structure of a great city, itself created to suit the miscellaneous transportation needs, must be adapted to these other specialized uses, and to the extent to which these transportation facilities have already been created in such a way as to be unalterable, the plan of the future must adjust itself.

Chicago, on account of its location in the center of a very rich agricultural territory, and at the headwaters of lake navigation, furthermore, at the point where, even in early days, river and lake transportation met and required transfer, became an important trade center and therefore attracted the railroad builders to extend their lines from all directions to reach it. And because the country surrounding us is flat, these railroads came in by the easiest or most convenient way—an advantage to Chicago in the early days, but a source of great difficulty today because it has produced a network and confusion of railway lines and intersections such as exists at no other place in the world. In most cities the geographical and topographical conditions determine the entrance through certain defined routes, and not otherwise. But, in spite of the apparent chaos, a study of the question develops the fact that, on the whole, the arrangement is more orderly than was at first suspected, and that the twenty-three railway lines reaching Chicago group themselves, as they approach the heart of the city, into seven well-defined arteries, as indicated in the diagram (Fig. 1).

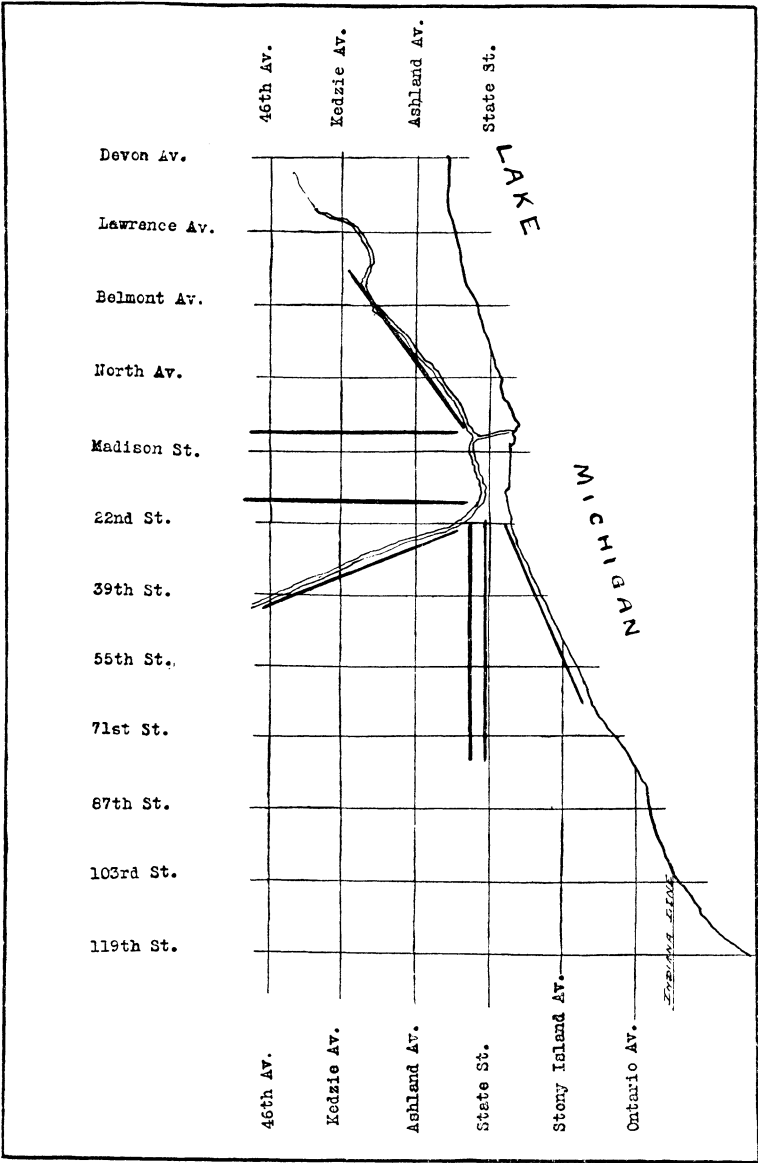


FIG. 1.—Skeleton map of Chicago, showing streets at two-mile intervals, the Chicago River, and the main railway entrances to the heart of the city.

Between these main railway arteries is a network of streets, some of them carrying an enormous volume of traffic, which converge into a constricted business district. That the main features of this anatomy are intimately interrelated, no one can deny; and, while the main railway and street arteries cannot be greatly altered, there are undoubtedly opportunities to modify and supplement them.

Diagrammatically, the relations of the North and South sides of Chicago might be likened to the two halves of an hour-glass, joined by a narrow and constricted neck; on one side might be shown the lake, on the other, adjacent but detached,¹ the West Side, the greatest both in area and in population of the city's three sections (see Fig. 2). Obviously, the problem of the Chicago Plan was to enlarge the passageway between the North and South sides through the business district, and at the same time bring the West Side into closer and more vital connection. The way the Plan proposed to accomplish this has been, perhaps, sufficiently illustrated, but its five principles may be here mentioned for convenience: (1) enlarging the business area by pushing the railway stations south to Twelfth St.; (2) straightening the river so as to open at least three new north-and-south streets; (3) widening Twelfth St. and creating a wide Congress St., to bring the West Side into closer and more intimate connection with the city's heart; (4) widening Halsted St. (the principal West Side street) and making it one side of the city's inner quadrangle; (5) establishing the city's future civic center on the West Side.

Long after this plan had been promulgated and adopted by the city as a general scheme toward which it should work, the Pennsylvania Company and allied lines, generally known as the Union Depot group of roads, submitted to the city a proposition for building a new station near the site of the old Union Station. Because the proposed depot involved some important modifications in the Plan, in respect to the proposed civic center and the Congress St. axis, and because it was particularly objectionable in that it

¹ The detachment of the West Side from the central downtown district is caused partly by the river, but also by the large area adjacent to the river given over to railway uses. The streets from the West Side to the business district are few and narrow.

enlarged the area in the downtown district already given over to freight facilities, and by overhead construction appeared to deny

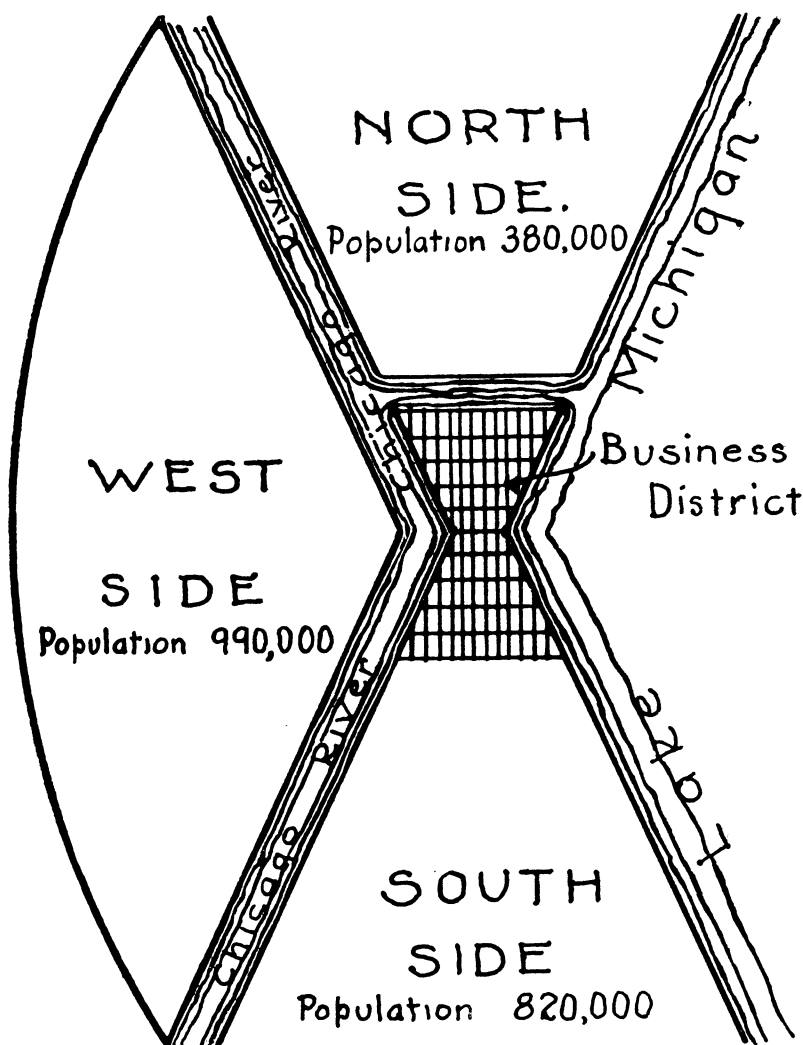


FIG. 2

the possibility of widening existing arteries or creating new ones, considerable opposition developed to the proposal. After a very thorough ventilation of the subject, the committee of the City

Council having the matter in hand employed Mr. John F. Wallace, an engineer of extensive experience and national reputation, to advise them. Subsequent to this, and quite recently, a disinterested group of citizens has employed Mr. Bion J. Arnold, a well-known electrical engineer, who has long been identified with urban transportation problems, to make a thorough study of the whole question and be prepared, if necessary, to review the work of Mr. Wallace. As a result of these studies, there is no doubt now that the whole subject will have a complete investigation, and while we may not succeed in carrying out the ideal solution, there is every reason to hope that certain important principles will be established.

It has been said before, but cannot be repeated too often, there are three interests prominently involved: (1) the steam railways, (2) the elevated and trolley lines, and (3) the public, represented by the city government and its citizens. There cannot be a satisfactory solution by any one of these interests without regard to the others, and while there is a disposition on the part of some of those affected, to feel hurt at the reception which their plans have received, because they feel that the public, instead of meeting those plans with criticism, should have accepted them with gratitude, yet this spirit is very evidently due to a misunderstanding of the city's true position, which is not hostile to the railroads or to any group of them, but is naturally and properly for the protection of its own future development in which the railway companies, like other citizens, are immensely interested.

Too little recognition is often given to the fact that the city has a right to work out an intelligent scheme of development which it is the duty of its own corporate officers and its citizens jealously to safeguard. Its streets and alleys are just as important to it as are the rights of way of those other corporate entities, the railway and the street-car system. The steam railway and the street railway are public service and "quasi-public" corporations, with rights and duties in many ways not dissimilar from the city corporation. A perfect adjustment of these interrelations necessarily needs careful planning and, above all, patient and

intelligent consideration of future needs. With us, as elsewhere, the people have been tardy; their representatives have imperfectly understood the problem; but in accepting the Commercial Club Plan of Chicago (as has been done officially) a start has been made in the recognition of an important principle. Never again will any public or private interest be allowed to put a substantial obstacle in the way of that plan. It may be modified and improved, but never dwarfed or throttled.

The Plan of Chicago as drawn showed alternative schemes for the railway terminal development. Each contemplated a group of stations along Twelfth St. and another group along Canal St., these two groups, connected by a wide street—Twelfth St. on the south and Canal St. on the west—representing two sides of a square. But those who worked on the Chicago Plan would doubtless admit that the study of this particular question has progressed so far since their plan was promulgated that the present solution must not be limited to following the suggestions already made, but should be studied in a thorough way, with full recognition of the necessities of the future. In other words, we must retain all the merits of the Burnham Plan and make such improvements and modifications in it as our more thorough experience and study shall dictate.

Enough has been said to point out that there must be co-ordination and correlation between the various transportation facilities, first, between the trunk-line railroads themselves, second, between these facilities and the city's facilities for traffic on streets, through subways, on elevated roads, or by river transportation. At the present time there is a very serious lack of correlation, which results in economic waste, and this in turn falls both on the transportation companies and on the public. The necessity of working out these interrelations may, perhaps, be best illustrated by notable failures to do so in other cities. Take Boston, for instance, where a fine development of a terminal (the South Terminal Station) was created without reference to the city's street-car system or to its relation and connection with the railways in the North Terminal Station. The difficulty of getting from the hotel or residence district of Boston to the South

Station, except in a cab, is pretty well recognized and is one of the things which ought to be corrected. In New York City, the Grand Central Station was long ago placed at Forty-second St. and Park Ave., but it took a good many years before the city's transportation facilities by subway, elevated, and surface lines adjusted themselves to this location; but this has now been done, and this center by gradual growth and adjustment has become one of the great focal points in New York City. The Pennsylvania Railroad, in building its new station between Seventh and Eighth avenues and Thirty-first and Thirty-third streets, located it there in the confident expectation that they would have a subway in Seventh Ave.; but the subway is yet a long way off, and the station—though ten blocks nearer the city center than the Grand Central Station of the New York Central—is, by reason of the lack of co-ordination with city transportation facilities, far from accessible. This seems to prove the contention of city-planners that the correlation of all transportation facilities is more important than distance alone.

An important feature of the Chicago problem is that the railways in the early days of the city's development acquired a large amount of real estate that is now near the center of the city (see Fig. 3). In all, there are some 250 acres north of Sixteenth St.; and because this is almost a solid block of property, with few streets across or through it, it is sometimes spoken of as a "Chinese wall." It is doubtful if the railroads could sell or abandon this property, even if they wished to do so; and, on the other hand, the public is interested in seeing the property developed. At the present time much of it is not only an eye-sore, but seriously injurious to the city and surrounding property. How it shall be developed more intensively, as we might say; how old streets may be widened and new streets extended through it are problems for the engineers, who are studying the question, to solve.

Railway managers are coming to the decision that expensive and extensive terminals are neither proper nor justifiable from any standpoint. There is a growing belief, especially in respect to suburban traffic, that there is no need of terminal facilities at all, but that by through-routing or continuous movement of trains,

the public would be better served and at less cost to the railways.¹ Depots, with their elaborate comfort facilities, are obviously necessary for long-distance travel, but with terminal stations relieved of the burden of suburban trains, less space would be required. Recent development in electrification, which is likely to come into use, at least for suburban service, in the not-distant future, opens up a good many new possibilities; and one of the advantages (or, as it might be called, a "by-product") of electric traction is to be found in the fact that, with the avoidance of smoke and steam and the gases of combustion, it is possible to utilize the space over tracks for general building purposes. In this connection, witness what is being done in New York City over the New York Central terminal. This clearly points to the fact that terminals, while enormously expensive (on account of the value of the property taken and the massive construction required), can yet be made, partially at least, self-sustaining. Another fine example is to be found in the Church St. Terminal office building of the Hudson Terminal Railway in New York City.

And in what has been said about this terminal question, the problem of the city's freight has not even been touched upon. As to this, certain generalizations can at least be laid down:

First: So far as possible, freight in transit to points beyond, whether in carloads or in small packages, must not be handled in the busy portions of the city. This problem is being dealt with and is in a fair way to be solved in the near future, in the so-called "Clearing" yard outside the city limits.

Second: It is just as important that the railway freight stations should bear some interrelation as it is that the passenger stations should. Indeed, it might be said to be even more important,

¹ The greatest transportation machine in the world, viewed from the standpoint of its capacity and safety, is the Interborough system of New York. Here, a four-track tunnel beneath the streets and through rock, costing, say, two millions of dollars per mile, is carrying enough passengers at a nickle fare to make it a highly profitable enterprise. The record movement in one day has been as high as 1,340,000 people; and this has been done by continuous movement of trains and an utter absence of expensive downtown terminals. Its annual capacity is about ten times that of the busiest railway terminal in this country.

because human beings have the advantage of mobility, whereas freight must be moved by some vehicle or form of conveyance.

Third: In respect to the freight business, as with the passenger, there must be an interrelation between other means of transportation, whether by roadway or waterway.

Fourth: The expenditures necessary to create these facilities must be justified by more economical methods or improvements in service.

The foregoing is little more than a statement of the difficulties which surround the vexing question of the relation of transportation facilities in a great city to the city's own street plan, which in itself is created to serve a multiplicity of transportation needs. The problem of Chicago, while exceptional in its details, does not differ in principle from that of other cities. If a happy solution can be worked out here, it will prove beneficial to all concerned in this and other communities. It is a problem requiring good temper, patience, fair dealing. It may be said with confidence that real progress has been made, first, in stimulating the imagination of many people as to what may be accomplished by intelligent city-planning; next, by a wide campaign of education all over the city in our schools, clubs, and churches, as to the features of the Plan; last, but not least, in substantial accomplishment—a widened Michigan Ave., the widening of Twelfth St. well in hand, the creation of a continuous park along our lake front about to be taken up, etc. The final solution of the railway problem may have been delayed, but it is safe to say it will be better for that delay. Our congestion, our bad housing-conditions, our slum districts, are all problems intimately related to the perfecting of an intelligent plan, and every blow struck should be in the direction of its accomplishment.

F. A. DELANO

CHICAGO